



SMACH's **Smart Technologies**


SMACH
SMART TECHNOLOGY

SMACH Co.,Ltd.

SMACH converts "can't" to "CAN!"

SMACH is a team of technology specialists providing product development and technology development services that meet the market's needs with its advanced power electronics technologies centered on saving energy for driving and controlling motors and high-efficient power converters.

SMACH can develop various power electronics products 

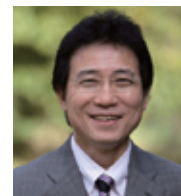
SMACH can provide mass production to various fields regardless of production volume 

SMACH can provide development tools as original products packed with energy saving technologies 

Along with the growing concern for protection of the environment, to reduce the amount of power consumption, energy saving technology is advancing. Such technology includes miniaturization of motors, improvement of energy efficiency, incorporation of inverter drivers, and improved performance of power conversion equipment such as converters, etc. However, in many areas, the transition is not smoothly carried out due to technological difficulties.

That is where "SMACH" comes in.

SMACH is a venture company specialized in power electronics technologies with its focus on technologies for controlling motors for energy efficiency. Utilizing the flexibility of a venture company, we develop products and provide engineering services that will perfectly match with customers' needs. Through power electronics technologies, we will contribute to development of society that is friendly to the global environment and comfortable for people. You can expect to see highly value-added engineering services by SMACH, a technological innovation company.



C.E.O. Sadao Kawahara



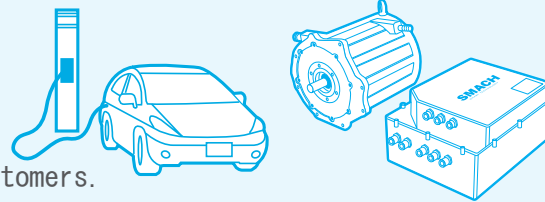
Solutions that **SMACH** can provide.

SMART TECHNOLOGY

SMACH is a professional of power electronics technology.

Development Services

With power electronics technologies centered on motor & inverter and power source management, SMACH provides product development support services tailed to the needs of our customers.



SMACH can provide mass production regardless of production volume.

Mass Production

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- Custom design
- High quality

ISO9001 certified factory
Inverter/converter/motor



Customer

SMACH can provide development tools packed with energy saving technologies.

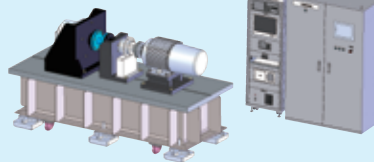
SMACH Original Products

Universal Inverter Driver



We can make it rotate smartly by any motors.

Motor Testing System



LED stroboscope



Handy type
Easy to use

*) Please refer to a catalog for details.

SMACH's universal technologies will support newly developing power conversion tools, such as motor inverters and converters.

SMACH's Vision

Through power electronics technologies, SMACH will contribute to realization of society that is friendly to the global environment and comfortable people.

SMACH is a team of energy saving professionals leaped out of Panasonic.



Just a few examples of development by SMACH

SMACH's "CANs" reach out to various fields

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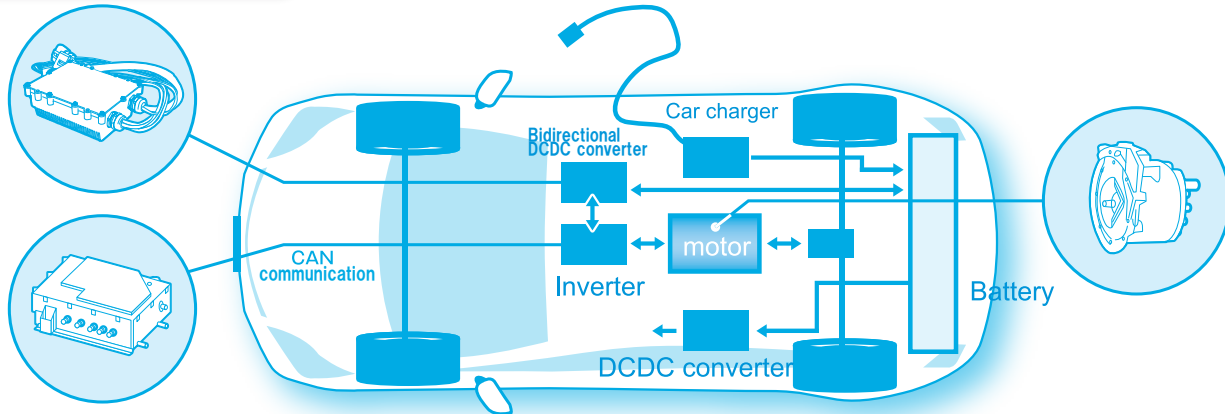
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1

Development Service Business

Motorize a variety of vehicles



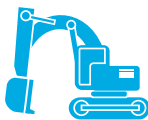
Electric car



Electric motorcycle



Forklift



Construction Machinery



Farm machine

Case 1 Traction motor inverter for electric vehicles

Case 2 Motor inverter for mild hybrid system

Case 3 Hydrogen pump inverter for fuel cell vehicles

Case 4 Inverter for electric car air conditioners

Case 5 DC-DC converter for construction machineries

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2

Development Service Business

Insulated bidirectional DCDC converter

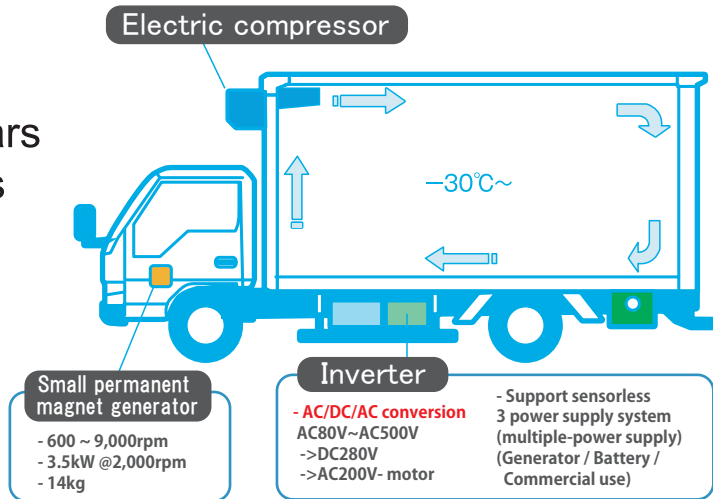
SMACH developed the DCDC converter optimal as a router which distributes electricity wisely.



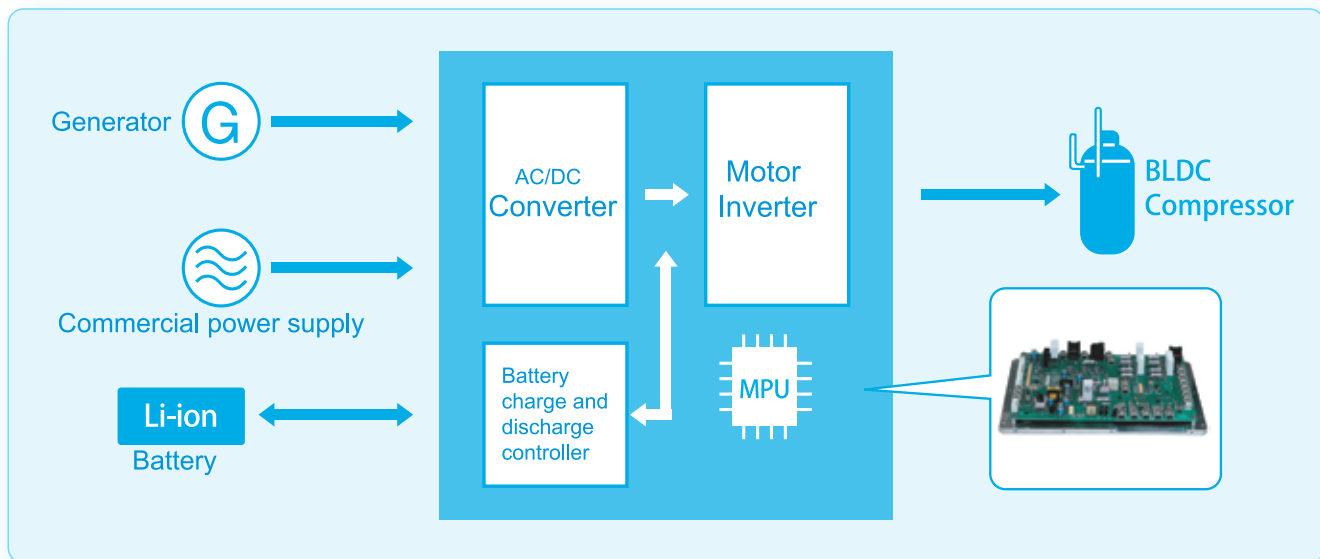
Mass Production Business

Inverter controller for freezer cars with in-house power generators

Next-generation freezer truck with high energy efficiency and meticulous temperature control equipped with an electric compressor generated by a special power generator via an inverter.



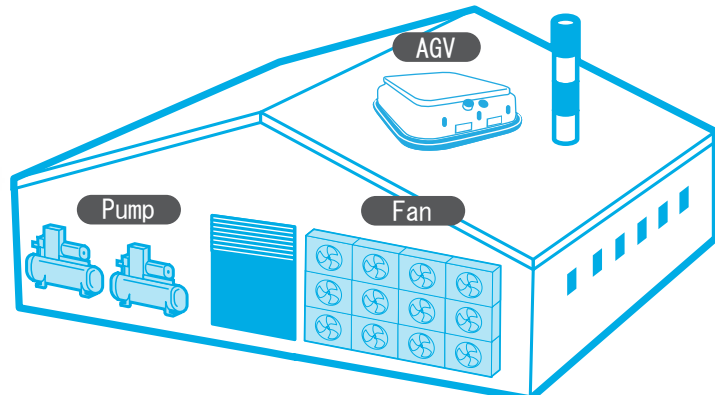
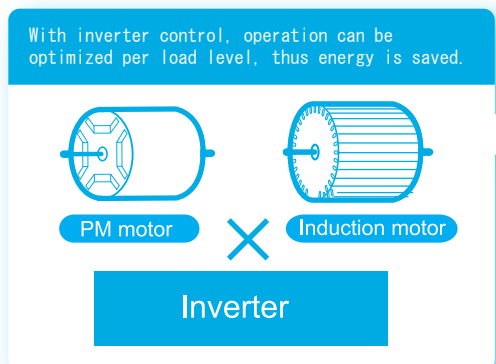
System configuration



Mass Production Business

Inverter for factory equipment (pump, fan)

To reduce CO2 emission, devices with motors need to have higher energy efficiency, by utilizing permanent magnet brushless motor for fans and pumps that are continuously run, with highly efficient inverter, a significant amount of energy saving has been accomplished.



■Corporate Profile

SMACH Co.,Ltd.

Foundation April 16, 2003

President & CEO Sadao Kawahara

Director Makoto Yoshida(CTO)

Director Ken Hineno (CPA)

Auditor Yoshito Fujikawa (LAttorney, Patent Agent)

Capital ¥95 million

Main Banks

Mizuho Bank

Sumitomo Mitsui Banking Corporation

[Location]

Head Office 2-1-61, Shiromi, Chuo-ku, Osaka, 540-6114, Japan

Development Center 18-8 Kinoshita-cho, Otsu, Shiga, 520-0812, Japan

Evaluation Center 7-3-46 Nojihigasi, Kusatsu, Shiga, 525-0058, Japan

[Business Contents]

1. Development and mass production supply of power electronics equipment
2. Manufacturing and selling of smack original power electronics development tools
3. Technical assistance and technology consulting business

■Company history

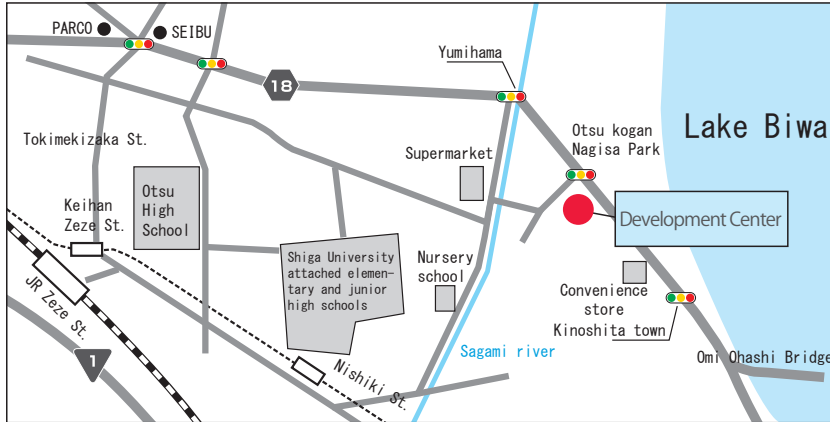
- Apr., 2003 Started a business as an in-house venture company of Panasonic.
- Sep., 2006 Established Universal Inverter Driver technology and started build-to-order manufacturing.
- Apr., 2007 Development and Mass Production of inverter controllers for refrigerated vehicles that support idling stop.
- Apr., 2010 Development and commercialization of inverter controller for turbo molecular pump.
- Aug., 2011 Started build-to-order manufacturing of Motor Testing System.
- Dec., 2013 Independent from Panasonic Corporation by MBO.
- Jan., 2015 Universal Inverter Driver selected as "Kansai Manufacturing New Selection 2015" by Kansai Bureau of Economy, Trade and Industry, Ministry of Economy, Trade and Industry.
- Jan., 2016 Motor Testing System selected as "Kansai Manufacturing New Selection 2016" by Kansai Bureau of Economy, Trade and Industry, Ministry of Economy, Trade and Industry.
- Jan., 2017 Compact high-efficiency engine power generation and power storage system selected as "Kansai Manufacturing New Selection 2017" by Kansai Bureau of Economy, Trade and Industry, Ministry of Economy, Trade and Industry.
- Dec., 2017 Selected as "Regional future leading company" by the Ministry of Economy, Trade and Industry.
- Jan., 2018 Universal Inverter Driver development engineers received the Excellence Award of "7th Manufacturing Japan Award" of Ministry of Economy, Trade and Industry.
- Jan., 2020 The large capacity motor test site installed.

■Main customer

- Toyota Motor Corp.
- DENSO Corp.
- Toyota Industries Corp.
- AISIN Corp.
- Toyota Boshoku Corp.
- Hino Motors, Ltd.
- SUBARU Corp.
- JTEKT Corp.
- Nissan Motor Co., Ltd.
- Honda Motor Co., Ltd.
- SUZUKI MOTOR Corp.
- MAZDA Motor Corp.
- Hitachi Astemo, Ltd.
- Yamaha Motor Co., Ltd.
- Nichicon Corp.
- Valeo Japan Co., Ltd.
- Taiho Kogyo Co., Ltd.
- Musashi Seimitsu Industry Co., Ltd.
- Mitsubishi Heavy Industries, Ltd.
- Kawasaki Heavy Industries, Ltd.
- IHI Corp.
- Sumitomo Electric Industries, Ltd.
- Sumitomo Heavy Industries, Ltd.
- Nabtesco Corp.
- ShinMaywa Industries, Ltd.
- NIPPON STEEL Corp.
- Shimadzu Corp.
- NACHI-FUJIKOSHI Corp.
- Komatsu Ltd.
- NIDEC Corp.
- Yanmar Co., Ltd.
- Kubota Corp.
- Iseki & Co., Ltd.
- Panasonic Corp.
- Shintec Hozumi Co., Ltd.
- OMRON Corp.
- DAIKIN INDUSTRIES, Ltd
- FUJITSU GENERAL LIMITED
- Hitachi, Ltd.
- Toshiba Corp.
- Topre Corp.
- Osaka Vacuum, Ltd.
- NAKANISHI Inc.
- NISSEI Corp.
- DAIHATSU MOTOR Co., Ltd.
- EXEDY Corp.
- Samsung R&D Institute Japan Co.Ltd.
- RENAULT Group
- AQUA Co., Ltd.
- LG Electronics Inc.
- Hanon Systems Corp.
- Guangzhou Automobile Group Co., Ltd.
- Osaka University
- Tohoku University
- Kyushu University
- Osaka Prefecture University
- Ritsumeikan University
- Akita University
etc.

A c c e s s

Development Center (Otsu, Shiga)



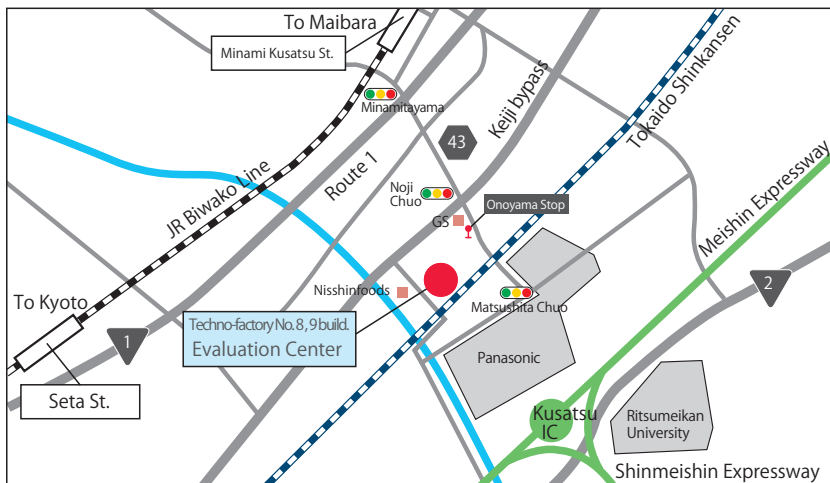
○About 15 minutes walk from the JR Biwako Line Zeze Station or Keihan Electric Railway Zeze station.

About 10 minutes walk from Keihan Electric Railway Nisiki station.

TEL. +81-77-526-8815

FAX. +81-77-526-8816

Evaluation Center (Kusatsu, Shiga)



○About 10 minutes by taxi from JR Biwako Line Minami Kusatsu Station.

From the JR Biwako Line Minami Kusatsu Station and ride about 5 minutes bus to Onoyama bus stop and walk about 10 minutes.

TEL. +81-77-569-5884

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共存共栄

Co-existence and co-prosperity





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